7: Thompson--185-186 J-4 (no date) 1937 Laotians
116, 276, 655

"Laos's opium Régie [JUM: government agency charged with administering an indirect tax] was always directly administered because it presented the unique feature of a soil suitable to poppy growing. The natives had always grown enough for their own needs, so the government subsidized local efforts for a large-scale production. The result was not without charm. Two colonists in different regions were given seed and piastres. After two years, officially given to ruthless labour, an Inspector was sent to report. One of the colonists claimed that the seed [186] he had sown never came up. The other was more cynical: 'I am a remarkable man,' he told the Inspector. 'Potatoes grow where I sowed poppy seed.' (1)

1. Salé, G., Histoires Coloniales (Paris, 1931), p. 84."

10: d'Orleans--263-264 T-3 (1891-92) 1894 Laos
116, 276, 301, 563, 777 Ethnic subgroups

"The boatmen [LSS: Kha from Laos] replace the waterpipe used on the Black River by the cigarette, which they put behind the ear after a few whiffs. They also chew betel. I remark that the majority of them wear a bracelet, made of two threads, on the right wrist. They tell us that it is a talisman--a kind of [264] luck charm, which is given to them when they leave their village to navigate or trade."

10: d'Orleans--277-278 T-3 (1891-92) 1894 Laos
116, 276, 563 Ethnic subgroups

"Our men [LSS: Kha boatmen, in the service of a Laotian] smoke a wooden pipe, with a small bamboo stem, like those of our countries. [278] They light it with a steel and a wick made of fibres taken from the bark of a tree. They also smoke opium; Chinese caravans bring it to them raw, and they pay about a rupee for nearly three quarters of an ounce (twenty grammes), they cook it over the fire in a small copper cup. Three Laotians from Luang Prabang, who are also in the sala, devote themselves to the same work; they are merchants, who have come to buy rice. The apparatus ready and the lamps lighted, each man lies down and we go to bed."

10: d'Orleans--362-363 T-3 (1891-92) 1894 Laos
116, 276, 439, 655, 177.27 Siam
636.27

"... The opium monopoly has been set up in Luang Prabang by the Siamese. Not content with having, during the past century, ruined and depopulated the valley of the Mekong, and with weighing it down with taxation, they now seem anxious to crush its trade and arrest its growth. From our point of view, it is a matter of indifference to us if the relations between Luang Prabang and China become less close and friendly, and we may even turn this change to our profit, for the caravans which were wont to bring opium down the routes parallel with the Mekong, will find it answer [sic] their purpose to branch off in the direction of the Black River, and to effect their exchanges with Upper Tonkin.

I can answer for the fact that during the past year only one caravan reached Luang Prabang from the north, this consisting of sixty mules from Xieng [363] Hong, which took a month upon the journey by short stages, eight being loaded with iron, four with tea, and the rest with Chinese groceries, sugar, opium and a little silk."

23: Franck--271 T-2 (1924) 1926 Laotians
116, 276, 411, 482, 492 Ethnic subgroup

"The men, [EJ: of the 'Black Miao'] and sometimes the women, carry crude daggers in home-made sheaths; some had a long slender rifle, a few of them crossbows of a simple form, and most of them smoked or carried in their sashes pipes of sometimes elaborately tortured shapes. They use pack-oxen as well as little horses, but most of them, of both sexes, carry in a basket on their backs, though Chinese influence perhaps has led some to fasten two baskets at the ends of a short, stiff whole bamboo over a shoulder, thereby losing all the advantage of the long and supple shoulder-pole of China and Annam."

23: Franck--279-280 T-2 (1924) 1926 Laotians
116, 276, 304

"The Laosians [280] do not enamel their teeth, but most of them chew betel-nut."

25: Brodrick--101 [3] S-3 (1939) 1948 Laotians
116, 181, 224, 276

"The men and the women both smoke and often they smoke pan, a sort of hemp, not unlike the Moroccan kif, but the Laotians mix their pan with tobacco. And everyone chews betel.

The Laotians' ideal in life is to chew betel, to drink rice-alcohol, to make love and to sleep--they are very good sleepers. Their economy is still half pre-agricultural, hunting and fishing afford food and amusement, and amusement, of course, because men are not wholly dependent upon the product of the chase."

25: Brodrick--106 [2] S-3 (1939) 1948 Laotians
116, 276, 293

"There stroll by the Laotian girls, lazily self-possessed and free-seeming, and, if it is a feast day, gaudy with satin and velvet and gold and silver thread and innumerable bangles and necklaces. Slung over their shoulders is not only the yellow scarf but the black and gold lacquer nécessaire containing the betel-chewing outfit--scissors, lime-pot, nuts and tube for the wax you smear on your lips so they may not be seared with the astringent juice."

68: Mouhot--95 N-5 (1858-61) 1864 Laotians
116, 855, 276

"[HD: Among the Laotians at Khao-Khoc, Siam. See category 116, p. 90] All the children of the neighbourhood, most of whom are still kept at the breast, come frequently to bring me insects, in exchange for a button or cigarette, for it is a common thing for them to leave their mother's breast to smoke. Were they not so dirty, they would be nice-looking; but I am afraid of touching them, lest I should again catch the itch."

68: Mouhot--269 N-5 (1858-61) 1864 Laotians
116, 276, 609

"I am overwhelmed with presents of all kinds in return for the slightest favour shown to these unfortunate people. [HD: i.e. the Laotians in the city of Luang Prabang] They seem to me some of the most to be pitied that I have seen; even the women and children are opium-eaters: they might really be called a nation of crétins."

149; Reinach--139 G-3 (no date) 1901 AM1 Indochina
Laotians AM8

357

Houses are generally situated in the middle of an enclosure which serves as a garden, and where coconut palms, betel palms and other fruit trees are planted.

276

Use of tobacco and betel. The Laotians use tobacco, which they grow and prepare quite skilfully, in the form of conical cigarettes which are rolled in dried banana leaves. They also mix it with their betel quids. Everybody smokes--men, women and children. It is not unusual to see children four years old, completely naked, puffing clouds of smoke from a cigarette which is enormous in comparison to their little fingers.

Like a great many other peoples of Asia, Laotians chew "betel." As we know this type of quid is composed of a leaf of "piper betel" which is smeared with slaked lime and on which is placed tobacco, a piece of betel nut or some "sisiet" bark (or [185] the extract from this bark, called catechu). It is then rolled and placed in the mouth between the cheek and the gums.

Chewing betel causes abundant salivation, blood red in color, which makes quite an impression at first sight but to which one gradually becomes accustomed.

It is claimed that chewing betel is not a mere habit, but that it has several useful effects on the organism. It is supposed to keep one from being thirsty and to be an astringent and tonic, somewhat like cola or coca.

302
751

Teeth lacquer. So as to preserv. the enamel of their teeth from the corrosive action of the lime and from other acidulous elements contained in the betel nut, the Laotians have the custom of lacquering their teeth black. To accomplish this they rub them with the sap of certain hardwood trees, which they obtain through partial combustion of the wood and condensation of the smoke on an iron spatula. A kind of sticky black coating is thereby produced, which dries rapidly and is made to adhere to the teeth by means of alum.

276

Opium. The use of opium is quite widespread in Laos, and unfortunately its effects do not help to diminish the natural apathy of the race.

304

Tattoos. It is customary for men to be tattooed from beneath the knee to the upper part of the thigh. For this reason the Laotians of the left bank of the Mekong are called "white bellies" in opposition to the Youns of the other bank, whose tattoos cover the stomach and abdomen and who are known as "black bellies." The tattoos are

Tribal Tai

291 the Deng-Thais, is applied to the edges of the gown. It is further
563 ornamented [233] on the outside edge opposite the buttonholes with colored silk embroidery which does not go down below the waist.

This garment is also folded in half lengthwise and worn rolled around the body with the sleeves left hanging.

302 The women wear their hair parted down the middle in front
301 and rolled into a sort of long tassel behind which is contained within the folds of a little turban. The latter is wound above the forehead and the free end inserted under the first turn, on the nape of the neck. This headdress is quite similar to that of the Annamite women in Tonkin.

In certain regions of Laos, Thai women wind their hair into a sort of coil which girls wear loosely down their neck and betrothed or married women wear on top of the head. Thai jewelry is made of heavy silver and is of the same type as Laotian jewelry. The men wear bracelets on their wrists.

262 Food. The Thai diet is like that of the Laotians, but they prefer
264 non-glutinous white rice and use chopsticks like the Chinese and Annamites.

The use of betel is quite widespread among the Thais, but in
276 contrast to the Laotians they keep their teeth white. The Thais smoke the oily, opiated tobacco of Tonkin and China in bamboo waterpipes whose tiny bowls only contain a small pinch of tobacco. They also smoke a local variety of tobacco, either in cigarettes or in pipes with a highly worked clay bowl into which a long stem ending in a glass or jade mouthpiece is inserted.

156 Character. Although serious and reflective, the Thais have a vivacious and friendly character. They are somewhat cold in appearance, but are sound friends and highly affable when one gets to know them better.

[701] Gentler and more timid than the Laotians, they have no taste for the art of war and it is difficult to get them to stay in the native militia.

433 They are very self-seeking and much more miserly than the Lao-
438 tians. [234] It should be noted, moreover, that since they produce everything themselves and are a people of farmers and livestock
156 breeders, they do not have, by virtue of their ever sedentary occupations, the opportunities which these latter have to enjoy fairly high profits resulting from commercial transactions, nor the special habits which contact with different races gives.

181 The Thais love pleasure and celebrations. Guaranteed their daily
461

Tribal Tai

619 The Neua-Thais. The Neua-Thais differ very little, in all
361 respects, from their fellows. They generally live on higher ground than the other Thais, but they change the location of their village quite frequently. [241] [Illustration] [242] [Blank page] [243]

291 The women knot their skirts under their armpits, above their breasts, and always wear a very short jacket made of cotton, silk or velvet, depending on the season.

231 They engage in sericulture, and with the silk spin and weave brocaded cloth with harmonious colors.

779 At the same time as ancestor worship, the Neu-Thais practice an attenuated form of Buddhism. Pagodas are rare and the bonzes, few in number, serve several centers in turn.

461 Their character is docile. They do not have a very marked taste
276 for trade and are content to be excellent farmers and livestock breeders. Unfortunately, they are inclined to be opium smokers. This is doubtless due to the proximity of the Meos and Yaos who are the producers of the drug.

619 The Phou-Eunes. This branch of the Thai family is very close to
101 the Laotians in mores and customs.

There are only a few modifications in costume and language, modifications due to the age-old proximity of the Annamites and the continuous relations which have existed between the two peoples.

[438] These latter may be explained by the fact that the territory long inhabited by the Phou-Eunes in the east and southeast of Tran-Ninh is situated on the Tonkin Gulf side, and that their produce naturally flows towards the ports on the Annamite coast (1).

(1) To be sure, there are several groupings of Phou-Eunes in the Mekong basin, in Tran-Ninh, to the northeast of Vien-Tiane and in Camkeut-Cammon.

361 The Phou-Eunes prefer to live in high valleys and on high plateaus where the climate is quite severe during the winter. They are more reserved in character than the Laotians, more industrious and less inclined to celebrations and festivities of all kinds.

779 Their religion is Buddhism, but the bonzes are less numerous than elsewhere. It is probable that the little taste which Phou-Eunes have for the religious life is due to the influence of nearby Annam, where the bonzes are a long way from being venerated and coddled as they are in Laos.

291 The men's costume is like that of the Laotians. A few, however, have adopted the Burmese costume, turban and all, in which case they let their hair grow and roll it in a coil instead of having a brush cut.

The women wear a very long skirt with broad stripes running across it which is fastened beneath the breasts. The bust is covered by a closed jacket or bodice which is cut straight and made of cotton or silk [302] of varied colors. Their hair is rolled in a coil on the nape of the neck [301] or is held in place around the head by a narrow band of cloth and allowed to fall freely down the back. Both sexes wear metal cylinders in their ears, like the Lus, and silver jewelry.

[142] The Youns are more robust than their fellows, and also more industrious. The women are perhaps less pretty than the Laotian women, but they are just as friendly and merry.

276 [251] Both men and women chew betel, and also "Mieng" (green tea, fermented and salted). They smoke tobacco in enormous cigarettes rolled in dried banana leaves. [Illustration alongside text here]

The Youns are primarily farmers and livestock breeders. They excel in breeding and training oxen as draft animals.

212 We have seen that the Youns, although they speak the same lan-
292 guage as the Laotians, have their own form of writing which is generally used for religious writings. Their bonzes, who are highly learned for the most part, are renowned for their expert knowledge of the rites of the Buddhist religion.

101 Marriage, divorce, polygamy, births, funerals, celebrations and festivities are all the same among the Youns as among the Laotians, except for a few minor differences in detail which we need not mention here.

## THE KHAS

619 Before entering into detail about the mores and customs of the
181 main Kha families, we shall again have recourse to the learned work by the Superior Resident in Laos in order to give a general sketch of this race which represents at least a third of the population.

[252] "They are to be found throughout the territory, and are divided into more than sixty families. As much as those who inhabit northern Laos are docile, manageable and respectful, so are those who inhabit the southern part of Laos proud, independent and warlike, particularly the tribes inhabiting the mountains which separate [illegible] from Annam.

caught even on the other side of the watershed and then delivered as slaves to the Burmese, Siamese, Cambodian and Laotian merchants of the low country. The barbarity of their mores has been greatly lessened since our arrival in Laos, but traces of it still exist and manifest themselves in rivalries and attacks between tribes. The police force which [260] we have organized in the land in the form of a native militia, the influence of the missionaries who have settled among the turbulent Khas, and also the help and example of the tribes which have submitted to our tutelary authority will soon cause this abnormal state of things to disappear. Finally, our increasingly effective occupation of the land, which has been completed by the organization of the province of Darlac, and the strict protectorate which we exercise over Cambodia, the chief purchaser of slaves, have begun to bring order in an effective fashion to this shameful traffic in human flesh (1).

(1) See § I of Chapter XI.

It should be noted that the Djarais and the Rades are the only Khas who speak Cham, that is to say a greatly corrupted Malay tongue which they have preserved for centuries.

The men's clothing consists of a loin-cloth, and that of the women consists only of a short skirt knotted around the waist or under the armpits, the torso left bare.

Both men and women have long hair wound in a coil. Both sexes, but mainly the men, wear jewels of a crude shape, made of tin or brass, in the form of bracelets, neckbands, ear pendants or cylinders and hairpins. They are also very fond of glass bead necklaces.

These Khas smoke tobacco, either dried or green, as well as bamboo shavings impregnated with nicotine. They make terra cotta pipes with highly worked bowls and also use imported brass pipes. They do not blacken their teeth.

From the point of view of diet and housing, practically the same conditions obtain as we have seen above except that the houses are built with greater care and arranged in the form of a circular camp.

In the middle of Cedang and Rognao villages there is a large house some twenty to thirty meters long by twelve to fifteen meters wide, with a high pointed roof. This is the common house where all the boys of the locality live from the age of nine or ten until the day of their marriage.

Finally, the Ao-Tchaine Yaos owe their name (bearing sapeks) to the fact that the men's jacket, which is shorter than that of the other Yaos, is ornamented in front with several rows of flat copper or silver buttons which resemble sapeks (Annamite and Chinese coins).

The women fasten a pad of compact, gummed hair on their coil by means of sticks made of ivory, of bone or simply of wood.

Like the Meos, the Yaos inhabit the peaks of mountains in northern Laos where they grow poppies. They are confirmed opium smokers.

[270] [Blank page] [271] [Illustration at top]

## CHAPTER V

### 1. ORGANIZATION

Consulate and Commercial Agencies. Before the treaty of October 3, 1893, we already had a consul at Luang-Prabang in the Mekong basin, on the right bank of the river. In 1892 the vice-consulate was closed and commercial agencies were set up at Luang-Prabang, Outhene and Bassac on the right bank, and then at Stung-Treng on the left bank. The first three agencies were directed by representatives of the French Syndicate of Laos, and the last by a clerk of Posts and Telegraphs. The commercial agents performed the functions of consular agents. Later on in 1894 and 1895 when we actually took possession of Laos, that is to say of the territory on the left bank of the Mekong, two additional agencies were established at Xieng-Khong and Xieng-Sen. [272] Then in 1895 the agencies of Pak-Lay, Xieng-Khan, Nong-Khay, Lakhone, Ban-Mouk-Dahan and Kemmarat were created on the right bank, bringing the total number to ten, for those of Stung-Treng and Luang-Prabang had been raised to the status of commissionerships.

These new agencies were directed by "commercial agents" specially appointed for the purpose. In addition to the delegates of the French Syndicate of Laos who continued to hold office, these agents included a few inspectors of the Tonkin native guard.

The duties of these officials were poorly defined, and their chief role was to assert our presence. They were mere information agents. For this reason official circles soon decided to abolish these posts, an action made possible chiefly by the establishment of two new vice-consulates in Siam, one at Oubone and one at Ban-Dua-Makeng.

Its price varies between 12 and 15 francs per hundred kilograms.

6. Catechu (Sisiet).

Catechu is produced from a decoction of the bark of two varieties of trees, the catechu acacia and the leafy butée.

This product, which is used in making the national masticatory together with betel, betel nuts and lime, is consumed, in the large centers of Upper Laos, in the form of a dry residue obtained from a decoction of the bark. Generally, however, it is the bark itself which is consumed after it has been broken up into small pieces.

Natural sisiet takes the form of shreds of bark about a cubit (.45 meter) long by four centimeters wide and one centimeter thick. The shreds are tied together in packs of twenty-five or fifty, depending on the region.

The whole production is consumed locally. The natives [334] go into the forest at points where suitable trees are to be found, bundle up the pieces and load them on great rafts which go down from Pak-Lay and Vien-Tiane to Bassac and even to Khong.

At Pak-Lay sisiet is worth only 7 francs and 50 centimes per hundred pieces, but it naturally costs more the further away one goes from the centers of production.

7. Curcuma (Khi-Mine).

This plant, of the Zingiberaceae family, has a rhizome which contains an orange-yellow coloring matter used for dyeing silk and cotton.

Sometimes the inhabitants (chiefly the women and children) rub their whole body with curcuma scrapings after a bath. The application of curcuma to the wet skin, which acquires a light yellow color, is said by the natives to ward off mosquitoes and keep the skin fresh.

Up to the present time this product has not formed the basis of any foreign trade. It is sold in small amounts on the markets of Laos.

8. Ginger.

The ginger which is called "Mak-Khing" in Laotian is the Zingiber officinale or gray ginger. Used as a condiment by the entire population, this product does not enter into trade. Its price varies between 12 francs and fifty centimes and 16 francs and fifty centimes per hundred kilograms.

9. Roucou.

The roucou, or fruit of the Roucouyer Bixia, is called "Kene-Mak-Soum-Phou" in Laotian. Literally, this means Seed of an acidulous mountain fruit. It is used to make red and orange dyes

249 is that grown in the regions which we have just mentioned. Because of its origin and the name of the two main distribution markets of the trade, it is called Nong-Khay or Vien-Tiane tobacco.

We do not have exact data on the annual production of tobacco in Laos, because of the excessive fragmentation of the plantings and the absence of a crop registry. But information gained from commercial statistics enables us to say that in 1898 exports from the Paklay-Pone-Pissay region reached more than 42 tons. Also, if we attribute to each [276] inhabitant two grams of tobacco per day (this is not an excessive figure) or ten grams per family of five, we find that total consumption in Laos would be from 340 to 345 tons annually, or a total production of about four hundred tons (1).

(1) See Appendix XXIII.

[435] [439] The export sale price varies from fifty to a hundred francs per hundred kilograms, depending on the quality.

248 COTTON. Cotton, a herbaceous and annual plant, is cultivated 439 almost everywhere in Laos for local consumption, and particularly in northern Laos for export to Yunnan. In fact, this product is almost the only return cargo for the mule and horse caravans which come in each year from Yunnan-Fou, Tali, S'semao, etc. with tea, furs, iron and copper pots, knick-knacks, etc.

248 The farming methods in northern Laos are as follows. Seeds are placed in pairs in holes which are about ten centimeters deep and spaced at varying distances depending on the region. Stony ground is preferred, on which the brush has been burned away both to clear the land and also [362] to fertilize the soil. No other fertilizer is used except the ashes of the vegetation which covered it.

The seeds are sowed in April or May and usually germinate a few days later. The plantings are harrowed and weeded twice each season, and harvesting is usually finished in November. The cotton is of a mediocre quality, with short staples, but despite this defect it is highly sought-after, as we have seen above, by the Chinese caravans which buy all of the available supply each year at the chief local markets. The height of the plant at full yield does not exceed sixty centimeters, and the yield per kilogram of bolls averages thirty percent or about 300 grams.

248 In southern Laos the cotton fields are small in extent, widely 311 scattered and formed chiefly of narrow strips of alluvial terrain on the

249 either in the natural state or in the form of black, pasty, molasses-laden sugar.

There are several varieties, the chief of which are the heavy, green cane which is highly cellulated, and the small violet-colored cane with joints closer together, which is fuller than the first.

Farming methods do not differ from those used in other countries. Cuttings are planted, and the plants are topped if they show a marked propensity to excessive leafy growth.

257 To manufacture sugar, the cane is crushed between two vertical
407 cylinders driven by two wooden gears of a most ingenious construction. A buffalo turns the whole by means of a crossbar or shaft, the end of which is attached to its neck and constitutes a whim. Sometimes the cane is crushed between two pieces of stone or hardwood, one of which rests on the ground while the other [364] is applied on top of it by means of a wooden lever. One or several persons work the other end of the lever with all their weight and move it up and down in a series of jerky motions. The juice extracted from the cane is placed in large [439] cast iron cauldrons shaped like cupels, which are imported by Chinese [415] merchants. Condensation takes place over an open fire laid in primitive hearths which are cut into the ground itself, if it is clayey. When the syrup reaches the desired degree of thickness the whole mass is poured into rectangular or circular molds made of wood or bamboo. After cooling the loaves of sugar which come from the molds, and which are from three to six centimeters thick, are wrapped in dry leaves. They are transported and sold in this form. The cane itself is called "Oi" and the sugar "Nam-Oi" or, literally, water of cane.

[276] The Laotians do not refine alcohol from the juice of sugar cane,
[101] and are even ignorant of the initial refining stage which the Annamites use and which produces brown sugar.

[435] The price of sugar on the markets of Laos varies from one point to another, and transactions involve small quantities only. Statistics do give evidence, however, from which market prices of 35 to 50 francs per hundred kilograms can be deduced.

249 INDIGO. We have seen above that the Laotians use the indigo-bearing properties of certain plants which grow wild in the forests in order to dye cloth goods blue. They also produce a variety of indigo, the Indigofera tinctoria, which is similar to the variety found in Bengal. The plant itself is called "Kok-Kame" and the extract or dye "Nam-Kame

149; Reinach--270 G-3 (no date) 1901 AM1 Indochina
Laotians AM8

GROUND NUTS. Only the subterranean varieties of ground nuts, or peanuts, are found in Laos. The inhabitants call this plant "Mak-Thoua-Dine," which means, literally, Fruit of the ground bean. Peanuts are not used for their oil, but are eaten boiled, roasted or with certain pastries in which they are incorporated. They are fed to convalescents as a tonic and restorative, doubtless because of their high nitrogen content. 244

COCONUT AND SUGAR PALMS. The former is called "Kok-Mak-Phao" and its fruit is called "Mak-Phao." The second is called "Kok-Mak-Tane" and its fruit the "Mak-Tane." The sugar extracted from the "Mak-Tane" is called "Nam-Tane." 245

These two trees are cultivated almost everywhere in the environs of villages.

Coconuts are consumed on the spot, either fresh or dried. In the latter case their meat is used to make an edible oil which is quite good when newly made, or else it is shredded and then used to make a kind of sugar cream. Coconut meat is one of the constituents of carry.

The number of coconut palms in Laos is not great enough [368] to provide for local needs and still leave any over for export of their pulp, which is known commercially as copra. Sugar palms are used only for the needs of the local population. The sugar which they yield is whiter than cane sugar as extracted by the Laotians, and so the natives give the name of "Nam-Tane" to the crystallized European and Chinese sugar, because of its color, and never apply to it the name "Nam-Oi," which designates their black cane sugar.

BETEL PALMS. Betel palms are grown wherever the altitude permits, and are even found at heights greater than eight hundred meters. [Illustration alongside text here] The betel palm, which is called "Kok-Mak," produces the "Mak" nut with the veined meat which enters into the composition of the national masticatory together with betel, lime, etc. 249 276

When it reaches maturity the betel nut is picked and prepared in two different ways in order to be either consumed on the spot or transported to parts of the country which have none. There is even a small export trade, but so slight that we need only mention it. [348]

It may be preserved whole after the floss envelope from which it is extracted has been dried, or else it may be cut up into [369] thin

249 segments, together with its envelope, while still green. The segments
• 276 are threaded in groups of sixteen on plant thongs and then gathered in packets of fifty or a hundred thongs. The packets are hung up at home near the hearth, and the smoke gives them a brownish color, dries out the nut completely and soon makes it insect-proof.

438 Since every Laotian, with only a few exceptions, has betel palms around his house, trade in betel nuts takes place only in the large mar-
276 kets, where there are packets of dried nuts which a few small merchants have collected. Within the country these packets are sold according to their number of nuts, and yet statistics give sale prices by weight, at figures varying between twenty and forty francs per hundred kilograms. It is probable that the latter figure applies to whole nuts, and the former to packets of nut segments.

249 BETEL. The betel leaf, which gives its name to the well-known masticatory, is a product of the Piper Betel which is grown everywhere in Laos and for which the trunks of betel palms generally serve as a support. It is to the cultivation of this plant that the Laotians devote the most attention. The soil is manured and weeded, the foot of the plant is surrounded by an earth mound, and the plant itself is protected against animals by a wooden enclosure. The betel palms around which the betel plants climb and twine profit from the care given the latter and generally produce a better harvest than trees which have been left alone. In order to water the betel plants, which often reach a height of seven or eight meters, the natives have devised a bamboo syringe, one end of which has a rounded nozzle pierced by small holes.

245 LAC. The tree on which the insects which secrete sticklac grow is called "Kok-Mak-Thoua-He." It is a biennial of the leguminous family and Acacia genus. Its fruit is a small edible bean, rounded and veined, which is contained [370]in groups of five or six in a soft, semi-parchmented pod. During its two years of life each shrub produces more than a million beans or seeds. A few of these are kept for seed, and the rest are consumed on the spot.

The cultivation of the shrub and of sticklac comprises two operations: seeding the "Kok-Mak-Thoua-He" and inducing colonies of coccus lacca to settle on its branches. The aphids of this insect produce the tinctorial matter called "Khang-Deng" or, literally, Red wax.

near their silkworm breeding houses, but it is unfortunate that the new conditions in which the trees are placed should have an adverse effect on silk production. On the plateaus and in the high valleys, in the vicinity of land once occupied by villages, there are many mulberry trees which have continued to survive. They send out new leaves again even after the annual burnings of the forest clearings, and bear leaves which are vigorous and have a more pithy appearance than those of their fellows in the low, humid parts of the country. They are also said to be preferable for feeding silkworms (2).

(2) See Appendix XXIV.

Local consumption absorbs the greater part of the silk production, for the majority of Laotians, both men and women, use it in making the garments which they wear.

We do not possess exact data on the total production of silk in Laos. It has been estimated at about twenty tons annually. The price varies from 400 to 500 francs per hundred kilograms.

OPIUM POPPIES. The opium poppy is cultivated by the Yaos and the Meos, in northern Laos. Towards the end of the rainy season, [376] in September, the poppy seeds are sowed broadcast on land from which maize has just been harvested. Germination is activated by the last rains of the season and the plant flowers at the beginning of December. Harvesting is done shortly after the petals have fallen.

Closely spaced lengthwise incisions are made all along the surface of the capsule, allowing the plant juice to escape. It coagulates upon contact with the air and is collected daily until the plant has been completely exhausted (1).

(1) See Appendix XXV, report of M. Lussan, Cochinchina customs agent. The latter was sent on a mission to Upper Laos to experiment with growing opium poppies by less rudimentary methods than the ones in use among the Meos and the Yaos.

PAPER TREES. There are several trees in Laos whose bark is used to make paper. They seem to be of the mulberry type and are called "Kok-Sa."

The paper is made by hand on forms, by extremely rudimentary methods. Its manufacture occupies several villages of northern Laos.

incorporate into the teas which they send abroad. But they appeal to the Chinese and other Orientals, and part of the crop is even set aside and sent as tribute to the court of the Emperor in Peking. 245 [648] [276]

The Shans, the Lus and the Youns use a masticatory called "Mieng" which is composed solely of tea leaves which have been preserved in brine.

PIMENTOS. Since pimento is a much sought-after condiment, and one which is even indispensable to the people of Laos, as to those of neighboring countries, the cultivation of this product is quite widespread. [244 263]

This pimento is of the large, red variety. It is prepared by [378] drying and smoking it, thereby guaranteeing that it will keep. Its name in Laotian is "Mak-Phik." The price of dry pimento varies from 25 to 37 francs per hundred kilograms.

FARMING IMPLEMENTS AND TOOLS USED IN LAOS. We shall conclude this rapid listing of the chief crops grown in Laos by giving a list of the farming implements used in the country. These latter are just as primitive and just as rudimentary as the farming methods, and the Laotians do not make any more effort to improve the ones than to improve the others. 412 241

The plow (Thai). The plow is extremely simple and is the primitive swing-plow formed of a single piece of bent wood. A share or "Mak-Sob-Thai" is fitted to its front end. Sometimes the share is even supplanted by cutting the stick of wood diagonally and hardening it in a fire. Drawn by a buffalo, this tiny plow cannot break the soil to any great depth, and so is used in ricefields only when the soil has been sufficiently softened by the annual inundations.

The harrow (Khat). The harrow is a sort of wooden rake .9 meter long, the teeth of which are made of ironwood or any other very hard wood, "Mai-Lek" or "Mai-Khen-Hine." This rake forms one of the sides of a triangle, the peak of which is harnessed to a buffalo.

The roller (Ham). The roller is the trunk of some hardwood tree, "Mai-Khen-Hine" for example. It has pins over which two shafts fit, leaving space to harness a buffalo.

The sickle. There are sickles of several sizes, which are called either "Kio" or "Lek Kio" without distinction. Sickles are used to cut grasses and rice.

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438 Chinese and Laotian middlemen and even the few European merchants--have found that it brings in rewarding profits. Indeed, by exporting this product the latter are assured of an almost certain gain of 20 to 30 percent.

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439 [387] Ramie. There is also much to be gained from increasing the production of ramie or Chinese nettle. It is assured of an outlet in Cambodia, where it sells for as much as 80 francs per hundred kilograms.

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185 Cinnamon. The extension of the plantations and gardens of cinnamon trees already in existence in the province of Vien-Tiane deserves serious encouragement. The bark of these trees is a valuable product which is much sought-after in China and in Europe.

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656 Opium poppies. The Government of Indo-China, which is both the preparer and seller of chandoo or opium for smoking, is the party which would gain most from obtaining the raw drug on French territory. It is, indeed, still dependent on British India for this product, and can acquire it only on extremely disadvantageous terms.

Since much time must still pass, however, before the Meos and the Yaos give up their age-old methods, it would be essential for the intensive cultivation of the opium poppy to be undertaken by Europeans on behalf of the administration. This would be possible if there were a guaranteed labor supply in the form of Chinese coolies, who would be enlisted primarily for the greater part of the work, and of native specialists who would deal only with scarification of the capsules, harvesting the opium and the first stage of its preparation.

These delicate operations are the ones which the Meos and the Yaos like best, but they dislike plowing, fertilizing, weeding and irrigation, all of which tasks are indispensable for obtaining a high yield of capsules and consequently of the raw drug. It would therefore be best to entrust this heavy work to foreign coolies, and it is probable that after a certain time they too would be capable of extracting the opium. Impelled by their example, the natives would doubtless then be seen to break with their prejudices and devote themselves also to intensive cultivation so as to reap its full benefits.

The role of the administration would then be at an end, and it would gradually diminish its intervention as free cultivation of the poppies increased.

[435 Raw opium which is produced locally or which comes from [388] neighboring countries is worth 22 francs, 50 centimes to 32 francs, 25 centimes per kilogram, depending on quality, in northern Laos.

396 is also cut out with a hatchet so as to decrease the thickness of the walls and render them more elastic.

When the pirogue is as wide as is desired, or else as wide as the wood being used will allow without any danger of splitting or bursting, strong rectangular crossbraces are set at regular intervals and tailed into the sides of the pirogues a few centimeters below the gunwales. When it has reached this state the pirogue is virtually finished. It has its final shape, and looks like the elongated half of a fish which has been split lengthwise.

All that remains is to finish the work by giving the bottom and sides the requisite thickness, by polishing the wood, smoothing the curves, etc.

Finally comes the moment of launching. It must be said, to the honor of the builders' sure eye and skill, that it is always successful and that once put into water the pirogue behaves well in its element, with a light and graceful balance.

396 The price of pirogues varies depending on their dimensions and [466] the region, and can therefore not be fixed in any absolute 439 fashion. A new pirogue, in fact, costs from 50 to 300 francs. In 435 Cambodia a pirogue from Laos costs twice what it cost in its land of origin. Thus it may readily be imagined that pirogues are exported from Lower Laos in fairly large numbers. The statistics for 1899 show exports of 552 pirogues of various dimensions, with a [Illustration here] total value of 55,195 francs, or an average purchase price of 100 francs apiece.

398 Cartwrights. The construction of carts, wagons, pack-saddles for oxen and elephant palanquins is a specialized industry only on the right bank and in Siam. In French Laos carts are little used because of the nature of the terrain, and there are no cartwrights. Pack-saddles for oxen and elephant palanquins are made by nearly everyone, particularly by drovers and carnacs.

317 Lime. Lime is made in Laos, primarily for inclusion in betel masticatories.

276 [467] The kilns are dug in the clay on banks of watercourses, near calcareous masses from which limestone is taken.

272 Alcohol. The distillation of grain--rice, maize and hemp-seed--is not an industry in the strict sense, for every village and every family makes alcohol on occasion.

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Tax on rice, paddy, horns, hides, etc.

| | Per picul (francs) | Per hundred kilograms (francs) |
|---|---|---|
| Paddy | 0.25 | 0.416 |
| Rice | 0.50 | 0.832 |
| Gum lac | 2.50 | 4.16 |
| Chinese nettle | 2.50 | 4.16 |
| Buffalo horns and hides | 2.50 | 4.16 |
| Buck horns and hides | 3.75 | 6.25 |
| Anteater scales | 3.75 | 6.25 |
| Cardamom | 5.00 | 8.32 |
| Elephant and tiger bones | 3.75 | 6.25 |
| Benzoin | 12.50 | 20.82 |
| Rubber | 12.50 | 20.82 |
| Wax | 12.50 | 20.82 |
| Ivory | 50.00 | 83.20 |
| Pirogues | ten percent ad valorem. | |

Also to be added are certain incidental receipts, such as those arising from chancery fees or those collected by the native tribunals in conformity with the rates scheduled by the code of Vien-Tiane.

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The royal treasury of Luang-Prabang subsidizes certain expenses, such as the upkeep of the kingdom's militia, of the native hospital in Luang-Prabang, of the Franco-Laotian school in Luang-Prabang, etc. [504]

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Finally, the general budget of Indo-China pays out a variable sum annually for the purpose of balancing the receipts and expenditures of Laos.

## C. Opium

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One of the most important sources of Laotian revenue is provided by the sale of opium. The administration is responsible for the sale of this substance, which it manufactures itself and which is marketed by licensed merchants acting as middlemen.

Before 1900, Laos sold on its own behalf the opium which was allotted to it by the Cochinchina Customs and Excise Office (1).

(1) This was true only for Lower Laos. The opium sold in Upper Laos came from the Luang-Prabang distillery, which is no longer in operation today.

657 paid for these allotments in cash, and took in as receipts the difference between the allotment price and the sale price. Today, as a consequence of the establishment of a general budget for Indo-China, 276 Laos sells directly on behalf of the Customs and Excise Office and 655 pays this office the entire sum resulting from sales made.

The following are the sale prices, per kilogram, of the Customs and Excise opium in the various provinces of Laos in 1900 and 1901:

| | 1900 (francs) | 1901 (francs) |
|---|---|---|
| Hua-Paun | 90.00 | 100.00 |
| Tran-Ninh | 75.00 | 100.00 |
| Luang-Prabang | 100.00 | 100.00 |
| Vien-Tiane | 92.50 | 112.50 |
| Seng-Khone and Cammon | 100.00 | 112.50 |
| Ban-Mouang and Saravane | 107.50 | 125.00 |
| Khong and Attopeu | 112.50 | 125.00 |
| Stung-Treng | 125.00 | 137.50 |

276 In 1898, total opium sales were 150,450 francs. If the total population of Laos is estimated at 500,000, then each inhabitant would consume an average of 0.3009 franc's worth of opium per [505] year. This is a negligible amount, if we compare it with that in neighboring countries, as demonstrated by the following table:

| Country | Total Population | Total opium sales in francs | Average share per inhabitant in francs |
|---|---|---|---|
| French Laos | 500,000 | 150,450 | 0.3009 |
| Siamese Laos | 700,000 | 440,000 | 0.6282 |
| Siam | 6,700,000 | 7,758,500 | 1.155 |

It does not follow, however, that the inhabitants of Laos smoke less opium than their neighbors, but rather that fraud is more rampant there than elsewhere.

It is estimated that the minimum opium consumption in Laos must be 3.50 francs' worth per registered person and per year. Now, since registered persons represent an average of 22 to 24 percent of the total population, opium sales must bring in receipts of about 400,000 francs and the share per inhabitant must be 0.8 franc, a figure approaching the norm between the average figures for Siamese Laos and for Siam.

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Opium sales are constantly on the increase in Laos, moreover, and it is probable that receipts for 1900 have reached nearly 350,000 francs.

## 5. BUDGET

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The budget of Laos was created by a decree of the governor general dated September 30, 1895. The first budget was that of 1896. It varies little from one year to another, and amounts to about two million francs. The following are the exact figures:

| | francs |
|---|---|
| 1896 | 1,819,245 |
| 1897 | 1,918,207 |
| 1898 | 2,008,806 |
| 1899 | 1,988,700 |
| 1900 | 1,847,500 |
| 1901 | 1,896,650 |

[506] Local receipts taken in in 1898 amounted to 356,925 francs. In 1900 they had risen to 516,250 francs, an increase of 159,325 francs. On the other hand, levies on the other parts of Indo-China which were necessary to balance the budget of Laos decreased by the same amount. In fact, since local resources are insufficient to cover expenses, it has been necessary to have recourses to subsidies provided by the other countries of the Indo-Chinese union. Thus Cochinchina provided 6/13 of the subsidy, Tonkin 5/13 and Cambodia 2/13. Since the creation of a general budget for Indo-China, the sum of these subsidies is entered there annually.

Each year a projected budget is prepared by the superior resident. It is presented to the Superior Council of Indo-China, which studies and approves it. Before it can become official, it must also be approved by the President of the Republic.

Here, as a sample, is the budget as established for the fiscal year 1900:

### A. Receipts

| | francs |
|---|---|
| Direct taxes..... | 316,250 |
| Miscellaneous taxes..... | 200,000 |
| Subsidy from general budget.... | 1,331,250 |
| Total receipts.... | 1,847,500 |

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| | | | | | | |
|---|---|---|---|---|---|---|
| Mai-mok | .2 to .25 | | | Forest glades | Lower Laos | Slightly yellowish wood, light, with fine grain; dwarf tree, bears large yellow flowers which are very odoriferous. |
| Mai-seng-kham | .5 to .6 | Bark used by the Laotians for chewing with betel. | | Forest glades | Upper Laos<br>Lower Laos | Yellowish wood with quite fine grain; well-grown tree; not very plentiful. |
| Mai-si | .3 to .4 | | | Forest glades | Lower Laos | Slightly grayish wood, quite close-fibered; well-grown tree; not very plentiful. |
| Mai-lieng | .6 to .7 | Used only for making plowshares. | No | Thick forest | Lower Laos<br>Upper Laos | Hard, knotty, red, rather dark wood; difficult to work with an ax, does not grow straight; not very plentiful; unlimited life. |
| Mai-scuek | .6 to .7 | | No | Thick forest | Lower Laos | Very hard wood, very dark reddish-gray in color, well-veined, difficult to work; very well-grown tree. |
| [120-121] | | | | | | |
| Mai-lam-sing | 1 to 1.2 | | No | Valleys and banks of water-courses | Lower Laos | Hardwood, dark red, close-grained, difficult to work; well-grown tree; quite plentiful. |

[table continued over]

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| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Mai-pedoung | | 20 to 25 | .8 to 1 | Paneling. | No | Thick forest | Lower Laos | Beautiful wood, purplish-red heartwood, blackens upon exposure to air. |
| Mai-ka-sam | | 25 | 1 | Building wood. | No | | Lower Laos | Hard and resistant wood, resembles the Mai-tabeng; plentiful; unlimited life. |
| Mai-hi-smi | | 18 to 20 | .6 to .8 | Framing. | Yes | | Lower Laos | Wood of inferior quality, hard but not very resistant, red in color; lasts from 6 to 10 years. |
| Mai-khai-so | | 18 to 20 | .6 to .8 | Framing. | Yes | | Lower Laos | Wood of inferior quality, hard but not very resistant, red in color; lasts for seven years. |
| Mai-nga-lai | | 15 to 18 | .5 to .6 | Interior woodwork. | Yes | | Lower Laos | White wood, of inferior quality; lasts for 5 to 6 years. |
| Mai-siziet | Catechu<br>Acacia catechu | 30 | 1.3 | The bark alone, which forms catechu, is used for chewing with betel. | Yes | Valleys and low slopes | Upper Laos | The wood is good only for burning. |
| [122-123]<br>Mai-kok-sa | | 8 | .25 to .35 | The bark alone is used in making a very resistant paper. | Yes | Valleys | Upper Laos | |
| Mai-so | | 30 | 1.5 | Framing and mediocre woodwork. | No | Low mountains and valleys | Upper Laos | Hard wood, fairly good, very light; not very plentiful. |

[table continued over]

249 plants. Then the soil is given a second dressing.

Up to the time when the stalk reaches a height of twenty centimeters, the poppy is often attacked by a worm which eats it either at ground level or a little below. It can easily be discovered buried in the soil near the stricken plant, and it is essential that the worm be destroyed. Whenever the surface of the soil is dry around the plants, it will be well to water the ground and thereby prevent these worms from hatching. At flowering time, that is to say three months after sowing the seed, the leaves are devoured by caterpillars. Sometimes also a small toadstool forms at the foot of the plant. These parasites are caused by soil that is too damp. It is then best to uproot the contaminated plants and drain the field, for although the poppy is fond of water it does not like to remain in it, and if forced to do so may suddenly wither away.

249 When the petals will come off easily and almost by themselves,
276 they should be removed, sorted into packs, and dried by exposing them in a well-aerated and very dry place. From time to time care should be taken to turn them over and remove those which are mouldy. These petals will be used to wrap balls of opium.

276 A few days later when the capsules have become somewhat harder, they are [150] scarified with a knife which has a rectangular blade and is placed so as to make four shallow incisions at the same time on the capsule walls, but affecting only the epidermis. The opium is at once exuded in the form of small drops which remain glued to the skin until the following day. In the morning after the dew the opium is collected with a scraper, then placed in a container and taken to the drying room. This operation is repeated each day until the end of the harvest.

If scarification is done in rainy or misty weather, it sometimes happens that after the opium is collected a blackish liquid forms which is rather like very strong coffee. This has to be carefully removed, or the quality of the opium will suffer. But since it is easy to recognize in advance, for the opium is laden with water, it is better then to convert it into chandoo which will be used as paste in wrapping the balls. When the west wind blows, as very frequently happens in Laos, this phenomenon does not occur.

The natives do not by any means take all these precautions, however, and so the opium which they produce is of inferior quality.

Each day the opium is stirred, either in the open sun or in a spot which is under cover but well aerated and very dry. It is worked in this manner until it reaches the desired consistency, then it is

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reduced to balls of equal weight.

In order to accomplish this latter operation, petals are carefully spread over the inside of a copper vase, and on the petals so arranged is placed a ball of opium which has first been smeared with paste (chandoo opium). The petals adhere to the ball, and its surface is kneaded lightly while it is covered with still more petals until no air can reach it.

The natives use paper from China or paper which they make themselves, and claim that petals give a taste to the opium. Experiments could be made to see whether they are correct, but it is certain that their method of wrapping is very quick.

Besides, even if they do not take the precautions necessary to obtain a sufficient yield and a high quality, they recoup their losses through fraud, which is just as inevitable in Laos as it is in India or Burma.

When the balls of opium are finished they are placed on racks and turned from time to time. They may even be exposed to direct sunlight, for the main thing is to prevent the formation of mold. Finally they are placed in chests which are divided into small compartments, each compartment designed to hold one ball, together with poppy leaves and capsules, so as to drive out humidity.

The seeds chosen for next year's crop are harvested when the capsules are ripe. The best ones are selected and exposed to the sun, then crushed and the seeds thus obtained passed through a sieve so that only the best ones can be saved for reproduction.

It is a good idea to bring in seeds of different origin each year, so that the plants will not degenerate.

[151] The yield from one hectare planted in poppies depends on the amount of money spent and the way in which it has been worked and fertilized.

It is best to choose a plateau situated at an altitude of at least 500 meters. The expense occasioned by a plantation on wooded land may be estimated at about 250 $.

In consequence of the land which is wasted (space occupied by tree trunks and irrigation canals), an average of no more than 50,000 poppy plants can be reckoned per hectare. Since each plant will produce from three to five capsules, which will yield one gram of opium, the total yield will be fifty kilograms per hectare.

These figures are for the first year's production, but costs will decrease in subsequent years and as many as 100,000 plants per hectare may be attained when all stumps have been burned and when their roots

276 have decayed in the ground. To be sure, it should never be forgotten that opium cultivation is a very delicate matter and requires much care and intelligent laborers who are difficult to find in the beginning.

In résumé, this product which is obtained by cultivating poppies brings a high price and is not at all cumbersome, so that even with the present means of transport it can support competition to advantage. The great quantity of opium consumed each year in Indo-China will provide sizeable revenues for Laos, and instead of continuing to buy the drug from the British the colony will sell it at a much more remunerative price.

The quality of Laotian opium is just as good as that of Indian opium. This is a proven fact, and we may therefore forge ahead with complete confidence.

New trials will be made at Khin-Mouak near Luang-Prabang. This is a well-chosen terrain at an altitude of 800 meters where water is plentiful in all seasons of the year and is sufficient to irrigate 200 hectares of poppies. I have had seven lime kilns established there so as to manufacture fertilizer on the spot.

(Report by M. Lussan. Bulletin économique de l'Indo-Chine.)

[152]

## APPENDIX XXVI
## THE CULTIVATION OF TEA

245 In the regions of production, the altitudes best-suited to the tea plants vary from 1,000 to 1,800 meters, and the terrain most favorable to them is the side of a mountain.

The tea plant is called "Kok-Tsa" in Laotian and its leaf "Tsa." This is obviously a corruption of the word "Tcha," which has the same meaning in Yunnanese.

Abandoned to itself and not given any care, the plant grows in complete freedom and reaches a height of six to seven meters. The leaves which it produces are hard, and the infusion which it yields has a bad taste and would seem to produce stomach trouble in those who drink it.

The cultivation of these plants consists principally in reducing their size to two meters at the most by encouraging the growth of lateral branches in a horizontal direction. The main objective of this method is to enable a man to reach all parts of the plant and to stimulate the development of leaves by frequent prunings of those branches which are becoming too voluminous. This operation is facilitated by the reduced height of the plant.